ECS5510-48S
High Density 48-Port 10G Ethernet L2 Switch

Product Overview
The Edge-Core ECS5510-48S is a 48-port 10 Gigabit Ethernet Layer 2 switch designed from the ground up to be deployed in medium to large data centers. With its unmatched port density, the ECS5510-48S is ideally suited for converged Ethernet applications such as 10 Gigabit Ethernet traffic aggregation and Fibre Channel over Ethernet (FCoE) storage interconnection.

Key Features and Benefits

Performance
The ECS5510-48S is a high density Layer 2 10G Ethernet switch encased in a small 1U form factor. Featuring 48 10G SFP+ interfaces, it offers unparalleled switching capacity, making it the ideal solution for medium to large-sized data centers.

The ECS5510-48S is capable of 960 Gbps of network throughput, enabling the switch to fully support the demand for bandwidth brought on by server virtualization.

Continuous Availability
Dual hot-swappable power supplies enable the system to continue operation even in the event of a single power supply failure. To ensure longevity, the ECS5510-48S employs data center-friendly front to back cooling, dissipating unwanted heat efficiently and effectively.

Data Center Requirements
With Ethernet fast becoming the de facto standard for the interconnection of data center devices, the ECS5510-48S is designed to overcome the challenges of a high-traffic-load environment, ensuring that traffic flows smoothly through the network without delay. It features:
■ Jumbo frames up to 10K bytes
■ 802.1Qau Quantized Congestion Notification (QCN)
■ 802.1Qbb Priority Flow Control (PFC)
■ 802.1Qaz Enhanced Transmission Selection (ETS)
■ FCoE ACL and FIP snooping

Energy Efficiency
The ECS5510-48S is easy on the environment as well as your energy budget. At less than 3 Watts per port, it is simply without peer. This level of performance is the result of an uncompromising design philosophy, utilizing:
■ State-of-the-art packet processor
■ Power supplies with greater than 90% efficiency
■ Variable speed fans
■ Advanced physical layer design

Simple and Flexible Management

The ECS5510-48S features both a user-friendly web interface and a command line interface for the advanced user. SNMP-based management is also fully supported.

Ethernet Switch

Features

Physical Ports

48 10 Gigabit SFP+ ports
1 RJ-45 management port
1 RJ-45 console port
2 PSU slots for removable power supplies

Performance

Switching Capability: 960 Gbps
Forwarding Rate: 714 Mpps
Packet Buffer Size: 4 MB
MAC Address Table: 32K

L2 Features

Auto-negotiation for port speed and duplex mode
Flow Control:
- IEEE 802.3x for full-duplex mode
- Back-Pressure for half-duplex mode

Spanning Tree Protocol:
- IEEE 802.1D Spanning Tree Protocol (STP)
- IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)
- IEEE 802.1s Multiple Spanning Tree Protocol (MSTP)
- Per-VLAN Rapid Spanning Tree (PVRST)

VLANs support:
- Supports 512 active VLANs
- Supports IEEE 802.1Q VLANs
- Port-based VLANs
- MAC based VLANs
- Protocol-based VLANs
- Supports private VLAN edge
- GVRP
- QinQ
- Support IGMP
- IGMP snooping v1/v2/v3
- IGMP querier
- IGMP immediate leave
- IGMP throttling
- IGMP filtering
- IFMPSNP leave proxy

Supports Multicast VLAN Registration (MVR)
Provides Link Aggregation
Support IEEE 802.3ad
Static trunking

QoS Features

8 priority queues per port / 128 groups per system
Priority queue scheduling scheme: strict priority, WRR
L2/L3/L4 Traffic classification / Priority Management
- IEEE 802.1p (CoS)
- DSCP/ToS
- TCP/UDP port number

Per-port bandwidth management

Data Center Features

FCoE
ACL and FIP snooping
802.1Qau Quantized Congestion Notification (QCN)
802.1Qaz Enhanced Transmission Selection (ETS)
802.1Qbb Priority Based Flow Control (PFC)

Security

Supports L2/L3/L4 Access Control Lists
User/Password-protected system management terminal (SNMP, Telnet, Web)
Static port security (MAC based)
Dynamic port security (MAC based)*
Supports RADIUS authentication
Supports TACACS+ authentication
MAC-based authentication
- User name and password authentication
- Local authentication

Remote authentication via RADIUS/TACACS+
Supports management interface access filtering
- SNMP
- Web
- Telnet

Supports SSH v1.5/v2
Supports HTTPS/SSL
Supports IEEE 802.1X
- Port-based
- MAC-based security*

Management

Switch Management:
- CLI via console port or Telnet
- Web management
- SNMP v1, v2c, v3

Firmware and Configuration:
- Firmware upgrade via TFTP server
- Dual firmware images
- Multiple configuration files

Configuration file upload/download via TFTP server
Supports RMON (group 1,2,3 and 9)
Supports BOOTP, DHCP for IP address assignment
Supports SNTP
Event/Error Log/Syslog
(Optional) ECView Pro, powerful network management software that maximizes the management capabilities of Edge-Core devices with:
- Topology management
- Event management
- SNMP management

Safety

CSA (CSA 22.2 NO 60950-1 & UL 60950-1)
CB(IEC/EN60950-1)

Mechanical

Dimensions (W x D x H): 440 mm x 596 mm x 44 mm
(17.32 x 27.46 x 1.75 inches)
Weight: 10 kg (22 lbs)
LED Indicators: Port, Uplink, System, Diagnostic

Electromagnetic Compatibility

CE Mark
FCC Class A

Environmental Specifications

Temperature:
- 0ºC to 40ºC (Standard Operating)
- -40ºC to 70ºC (Non-operating)

Humidity: 5% to 95% (Non-condensing)
Vibration: IEC 68-2-36, IEC 68-2-6
Shock: IEC 68-2-29
Drop: IEC 68-2-32

Ordering Information

Optional Accessories

10G SFP+ SR
10G SFP+ LR
10G SFP+ LRM
10G SFP+ CR pre-terminated twinax copper cables
1G SFPs for 1000BASE-X or 1000BASE-T

Product Description

10 Gbps, Small Form Factor Pluggable (Distance: 350 m; Wavelength: 850 nm)
10 Gbps, Small Form Factor Pluggable (Distance: 10 km; Wavelength: 1310 nm)

* Future Release